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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,488	02/23/2005	Manish Garg	NL 030363	4884

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EXAMINER

BAE, JI H

ART UNIT PAPER NUMBER

2115

DATE MAILED: 11/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/525,488

Applicant(s)

GARG ET AL.

Examiner

Ji H. Bae

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>8-29-2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claims 5, 8, 10, and 21 are objected to because of the following informalities:

1. Claim 5, line 2: >low= level;
2. Claim 8, line 1: clam 7;
3. Claim 8, lines 4 and 5: >on=, >off=;
4. Claim 10, line 3: >high=, >low=;
5. Claim 21, line 3: >high=, >low=.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, applicant has recited "the state" in line 9. Examiner notes that several "states" have been previously recited (active state, standby state, state retaining circuit), and thus it is unclear which state is being referenced.

Regarding claim 11, applicant has recited "the state of the circuit" in line 9. There is insufficient antecedent basis for this limitation in the claims. Applicant has not previously recited a state of the circuit in the claim.

Claims 2-10 and 12-22 are rejected by virtue of their dependency.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 11, and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Chang et al., U.S. Patent No. 7,127,228 B2.

Regarding claim 1, Chang teaches a method for reducing the power consumption in a state retaining circuit [Fig. 2] during a standby mode, comprising:

in an active state, providing a regular power supply [main power source 150'] and a standby power supply [backup power source 160'] to the state retaining circuit;

for a transition from an active state to a standby state, decreasing the regular power supply to ground level [Fig. 3, S310-S330, col. 2, lines 15-27] and maintaining the standby power supply thus providing circuit elements of the state retaining circuit with enough power for retaining the state during standby mode;

and for a transition from the standby state to the active state, increasing the regular power supply from its ground level to its active level [col. 2, lines 53-59].

Regarding claim 11, Chang teaches the method of claim 1, and also the state retaining circuit of the claimed method. Chang also teaches a control unit, data input/output unit, and data storage unit [power management unit and processor, I/O device, SRAM].

Regarding claim 23, Chang teaches the method of claim 1, and also the electronic device of the claimed method.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-10, 12-22, 24, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang in view of Roberts et al., U.S. Patent No. 6,333,671 B1.

Regarding claim 2, Chang teaches the method of claim 1, but does not teach decreasing the standby power supply from an active level to a lower level.

Roberts teaches a method wherein an internal voltage of a semiconductor is lowered from an activated mode level when the semiconductor enter a sleep mode, and increases the internal voltage when entering an active mode [col. 2, lines 24-28].

It would have been obvious to one of ordinary skill in the art to combine the teachings of Chang and Roberts by modifying Chang to reduce the voltage of the backup power source, as taught by Roberts. Both Chang and Roberts are directed towards electronic systems that employ a standby mode to preserve the contents of volatile memory. Roberts teaches that it is desirable to lower the voltage in such systems as much as possible, so as to reduce leakage current, while maintaining the lowest voltage necessary to retain the state of the memory. The teachings of Roberts would improve Chang by providing a way to reduce the leakage currents while simultaneously preserving the contents of the memory [Roberts, col. 1, lines 16-31, col. 2, lines 8-13].

Regarding claims 4-7, 12, 19, and 20 Roberts teaches holding a control signal at a predetermined low level [V_{ref} , col. 6, lines 3-13].

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Regarding claim 13, Chang teaches that the data input unit is connected to the regular power supply [Fig. 2, I/O device].

Regarding claim 15, Chang teaches that the data storage unit is connected to the regular power supply and the standby power supply [SRAM].

Regarding claim 24, Chang/Roberts teaches the method of claim 1-2, and also the electronic device to implement the claimed method.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Frank et al., U.S. Patent No. 6,212,641 B1;

Yabe, U.S. Patent No. 6,661,279 B2;

Chonan, U.S. Patent No. 5,463,588;

McClure et al., U.S. Patent No. 6,787,938 B1;

Ooishi et al., U.S. Patent No. 6,337,583 B1;

Bertin et al., U.S. Patent No. 5,986,962;

Noya et al., U.S. Patent No. 5,204,963;

Sakurai et al., U.S. Patent No. 4,683,382;

Liong et al., U.S. Patent No. 5,784,548;

Correale, Jr. et al., U.S. Patent No. 6,762,638 B2.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ji H. Bae whose telephone number is 571-272-7181. The examiner can normally be reached on Monday-Friday, 10 am to 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Lee can be reached on 571-272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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